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REMARKS

Claims 1-24 are pending in the present application. Claims 1-20 have been allowed, and no claims have been amended, added or deleted, leaving Claims 1-24 for consideration upon entry of the present Amendment. Reconsideration and allowance of the claims is respectfully requested in view of the following remarks.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 21 and 22 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,279,910 to Sasaki et al (hereinafter "Sasaki") in view of U.S. Patent No. 5,244,757 to Takami et al. (hereinafter "Takami"). Applicants respectfully traverse this rejection.

Present Claims 21 and 22 are directed to an asymmetric supercapacitor comprising a positive electrode comprising a current collector and manganese dioxide; a negative electrode comprising carbonaceous active material; an aqueous electrolyte solution; and a separator plate.

Sasaki is directed to a battery for reversible operation (Abstract). The positive electrode of the Sasaki battery comprises a metal compound and a high molecular weight component (Col. 4, lines 34-53). The positive electrode described in Example 1 comprises a current collector (Col. 6, lines 3-5). The negative electrode contains such materials as lithium metal, lithium compounds, etc. (Col. 4, lines 60-68). The electrolyte comprises an ion-conductive high molecular weight compound having an ionic compound dissolved therein (Col. 2, lines 21-23). Ionic compounds are dissolved in the high molecular weight compound by dissolving in an organic solvent and removing the organic solvent under vacuum (Col. 4, lines 1-9). As shown in Figure 1, electrolyte layer 3 is a solid electrolyte. This identity of the electrolyte as a solid electrolyte is confirmed in Example 1, Col. 6, line 18, where the electrolyte is referred to as an electrolyte layer. A separator is also disclosed (Col. 5, lines 9-17).

Takami is directed to a lithium battery having a negative electrode comprising a carbonaceous material (Abstract). The positive electrode is contains an oxide or chalcogen such as manganese dioxide as the active material and a current collector (Col.

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3, lines 1-17). The electrolyte is a lithium ion conductive electrolyte comprising a non-aqueous electrolyte solution of lithium, or a solid polymer electrolyte (Col. 7, lines 11-27).

In making the rejection, the Examiner states "Sasaki et al disclose a battery (figure 1) comprising a positive electrode (1) [that] comprises a current collector (2) and manganese dioxide (column 5 lines 52-53), a negative electrode (4), an electrolyte (column 6 lines 30-34), and a separator (3)" (Paper 21, Page 3). The Examiner further states "Sasaki et al lack the negative electrode comprising carbonaceous material" (Paper 21, Page 3). The Examiner uses Takami for a teaching of a negative electrode comprising a carbonaceous material, stating, "It would have been obvious to...modify the Sasaki battery as taught by Takami to have the negative electrode comprise[] a carbonaceous material in order to increase the power density and the capacitance for the battery" (Paper 21, Page 3).

The present invention is directed to an asymmetric supercapacitor comprising an aqueous electrolyte solution. Sasaki discloses a battery comprising a solid electrolyte comprising a "high molecular weight compound". Sasaki does not teach or describe an aqueous electrolyte solution as presently claimed. There is thus at least one element of the present invention that is not taught by Sasaki. Takami fails to cure the defects of Sasaki. Takami discloses a battery comprising a non-aqueous or solid electrolyte. Because Takami does not cure the defects of Sasaki regarding the electrolyte, the teaching of a carbonaceous negative electrode by Takami will not be discussed at this time.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a prima facie case of obviousness requires that all elements of the invention be disclosed in the prior art. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Sasaki and Takami fail to teach the aqueous electrolyte solution of the present claims and are thus missing an element of the present claims. Sasaki and Takami, alone or in combination, fail to render the present claims obvious. For at least the foregoing reasons, reconsideration and withdrawal of the rejections are requested.

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Claims 23 and 24 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Sasaki and Takami in further view of U.S. Patent No. 6,162,530 to Xiao et al. (hereinafter "Xiao"). Applicants respectfully traverse the rejection.

Xiao is directed to a chemical synthetic method for the production of nanoscale materials (Abstract). Example 2 in Column 14, line 51 to Column 15, line 36 describes the production of a nanostructured manganese dioxide.

In making the rejection, the Examiner cites Xiao for the teaching of nanostructured manganese dioxide (Paper 21, Page 3).

Claims 23 and 24 depend from Claim 21. As discussed above, Claim 21 and thus dependent Claims 23 and 23 contain the element of an aqueous electrolyte solution. Also as discussed above, neither Sasaki nor Takami teaches or discloses this claim element. Xiao does not discuss electrolytes, and does not cure the defects of Sasaki and Takami regarding the aqueous electrolyte solution. Sasaki, Takami and Xiao fail to teach an element of the present claims and thus fail to render the present claims obvious. For at least the foregoing reasons, reconsideration and withdrawal of the rejections are requested.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Cantor Colburn LLP.

Respectfully submitted,

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